

ABSTRACT

An image processing apparatus determines whether or not a target pixel TP which is the object of the smoothing process is an edge-forming pixel based on the edge level (gradient  $g$ ). If the pixel is determined to be an edge-forming pixel, the smoothing process employs an elliptical median filter instead of a moving average filter. The median filter MF has an elliptical reference area RA that is tilted (angled) to match the orientation of the edge  $E_g$  (edge angle), allowing the smoothing process to be carried out without compromising the edge components. The angle of the edge  $E_g$  is thus determined in the smoothing process, a median filter MF with an angle matching the determined edge angle is selected, and the selected median filter MF is used to carry out the smoothing process on target pixels TP which are edge-forming pixels.